

REMARKS

Applicant submits the following remarks in response to the Final Office Action of November 18, 2003 ("FOA"). Claims 18 and 21 have been amended, claim 19 has been canceled, and claims 23-27 have been withdrawn.

Election/Restrictions

The FOA withdrew from consideration newly submitted claims 23-27 for being directed to a non-elected invention. Accordingly, claims 23-27 are now listed as being "withdrawn" in the Listing of the Claims.

Drawing Objections

The FOA objected to the drawings for failing to show every feature of the invention specified in the claims. Specifically, the substantially straight line segments joined to each other by the arcuate line segment were not identified in FIG. 6.

Applicant has amended FIG. 6 to identify the first substantially straight line segment 25, the second substantially straight line segment 27, and the arcuate line segment 29 that form the piercing point 24 and hinge 42 illustrated in FIG. 6. No new matter has been added. Applicant respectfully requests that the objection be reconsidered and withdrawn.

Specification Objections

The FOA objected to the specification for failing to provide proper antecedent basis for the claimed subject matter. Specifically, the FOA asserts that proper antecedent basis for the first and second straight line segments and arcuate line segment is lacking.

Applicant has amended the specification to add further discussion of FIG. 6, which clearly shows that the piercing point 24 and hinge 42 are defined by a single continuous channel that has a first substantially straight line segment 25, a second substantially straight line segment 27, and an arcuate portion or line segment 29. As clearly shown in FIG. 6, the first end of the

first line segment 25 joins to a first end of the arcuate line segment 29 and a first end of the second line segment 27 joins to the second end of the arcuate line segment 29. Also, the first and second line segments 25, 27 are substantially parallel to each other, and the distance or offset between the first and second line segments 25, 27 is substantially less than the diameter of the arcuate line segment 29. Also, as clearly shown in FIG. 6, the gap 31 between the ends of the arcuate line segment 29 is substantially less than the diameter of the arcuate line segment 29. Thus, the arcuate segment 29 has a circumference that is substantially greater than 180 degrees.

Applicant respectfully submits that all of these features are clearly depicted in FIG. 6. Therefore, the addition of this material to the written description does not constitute new matter. Applicant respectfully requests that the objection be reconsidered and withdrawn.

Claim Rejections – 35 USC § 112

The FOA rejected claims 18-22 under 35 USC § 112 for various reasons. First, the FOA asserts that the following language is new matter: “but no more than one continuous channel through the polymer layer” and “but no more than one substantially enclosed area.” Second, the FOA asserts that the following language is indefinite: “at least one, but no more than one.”

1. Indefiniteness

Applicant has amended the claims to remove the indefinite language, which was meant to convey that each frangible piercing point has a single substantially enclosed area defined by a single continuous channel. In other words, each frangible piercing point has only one substantially enclosed area and only one continuous channel. The claims as amended more clearly make this point. Applicant respectfully submits that the claims are no longer indefinite. Reconsideration and withdrawal of the indefiniteness rejection is respectfully requested.

2. New Matter

It is clearly shown in FIG. 6 that each frangible piercing point has only one substantially enclosed area and only one continuous channel. Thus, a limitation directed to this situation is not new matter. Applicant respectfully requests reconsideration and withdrawal of the new matter rejection.

Claim Rejections – 35 USC § 102

The FOA rejected claim 18 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 6,116,782 to Arkins et al. ("Arkins"). Arkins discloses that (1) the outer polyester foil is removed within a straw piercing area, (2) laser energy is applied to the inside surface of the laminate such that one or more areas of delamination are created between the inner polyethylene layer and the metal foil, and (3) the areas of delamination are located within the straw piercing area. *Arkins, col. 1, ll. 29-63.*

These points correspond with FIGS. 2, 3 and 4 of Arkins. For example, with respect to the first and second points, FIG. 2 shows that the outer polyester layer 3 has been completely removed in the straw piercing area 2, and the area of delamination 9 is between the inner polyethylene layer 8 and the foil 6. The area of delamination 9 ends up being between the inner polyethylene layer 8 and the foil 6 because

[t]he inner heat-sealable plastic layer [has] a relatively lower absorption coefficient for laser radiant energy such that a high percentage (preferably at least 90%) of the radiant energy passes through this layer. In contrast the adhesive layer [has] a relatively higher absorption coefficient for laser radiant energy such that a high percentage of the radiant energy is absorbed and transformed largely into heat. ... [This] cause[s] localized heating and melting and vaporization of the adhesive layer.

Arkins, col. 2, ll. 7-27.

With respect to the third point, FIG. 3 shows that the areas of delamination 9 (i.e., the black rectangles) are within the piercing area 2 (i.e., the dashed circle). Also, with respect to the third point, FIG. 4 shows that the arc-shaped area of delamination 23 is within the piercing area 22 (i.e., the dashed rectangle).

In view of the preceding discussion, it is clear that Arkins discloses (1) a straw piercing area 2 without an exterior polymer layer 3, (2) areas of delamination 9 that are between the interior polymer layer 9 and the foil 6, and (3) areas of delamination 9 that are within the boundaries of the piercing area 2. Therefore, unlike independent claim 18, Arkins does not

disclose “a substantially enclosed area defined by [a] continuous channel and retaining the exterior polymer layer” and “a hinge adjacent to the substantially enclosed area and retaining the exterior polymer layer, wherein the exterior polymer layer extends in a continuous layer from the substantially enclosed area, through the hinge, and to the rest of the external surface,” and the “continuous channel [is] through the exterior polymer layer.”

For at least this reason, Applicant respectfully submits that Arkins fails to anticipate independent claim 18. Reconsideration and withdrawal of the anticipation rejection is respectfully requested.

Claim Rejections – 35 USC § 103

1. Arkins

The FOA rejected claims 19-20 under 35 U.S.C. § 103(a) as being unpatentable over Arkins. Specifically, the FOA asserts that it would have been obvious to modify Arkins to provide the additional aspects of the Applicant’s invention recited in claims 19 and 20. Claim 19 has been canceled.

As explained in the preceding section, Arkins fails to teach or suggest each and every aspect of Applicant’s invention recited in independent claim 18. The asserted modifications of Arkins do not remedy Arkins’s deficiencies. Since claim 20 depends on independent claim 18, Arkins also fails to teach or suggest every aspect of this claim as well.

For at least this reason, Applicant respectfully submits that Arkins does not make obvious claim 20. Reconsideration and withdrawal of this obviousness rejection is respectfully requested.

2. Arkins in view of Robichaud

The FOA rejected claims 21-22 under 35 U.S.C. § 103(a) as being unpatentable over Arkins in view of U.S. Patent 5,782,404 to Robichaud et al. (“Robichaud”).

As explained above, Arkins fails to teach or suggest each and every aspect of Applicant’s invention recited in independent claim 18. Arkins’s combination with Robichaud does not

remedy Arkins's deficiencies. Since claims 21 and 22 depend on independent claim 18, Arkins also fails to teach or suggest every aspect of these claims as well.

Furthermore, Arkins teaches against its combination with any art, including Robichaud, that has an exterior layer on the piercing point. For example, Arkins states,

[i]n the present commercial pouches [i.e., the pouches prior to the Arkins invention], the outer polyester foil [i.e., the outer polymer layer] is removed within a straw piercing area so that the straw (typically a pointed straw) does not have to pierce the polyester film. ... To gain access to the pouch the straw must then only pierce the metal foil and adhered polyethylene film [i.e., the inside polymer layer]; however, this has still proven to be a difficult task. ...

According to the present invention [i.e., the Arkins invention], access to a pouch by a straw is facilitated by the application of laser energy to the inside surface of the laminate such that, within the straw piercing area, one or more areas of delamination are created between the inner polyethylene layer and the metal foil. If the pouch laminate contains an outer polyester film, the polyester film is preferably removed in the straw piercing area. This removal may be done, as in the prior art, by punching out a straw piercing area from the polyester film before this film is adhered to the metal foil; alternatively, the polyester film may be removed from the straw piercing area by laser treatment after the polyester film has been adhered to the metal foil.

Arkins, col. 1, ll. 29-63.

Thus, the Arkins/Robichaud combination fails to teach or suggest each and every aspect of Applicant's invention recited in claims 21-22. Also, Arkins teaches against it combination with Robichaud.

For at least these reasons, Applicant respectfully submits that the Arkins/Robichaud combination does not make obvious claims 21 and 22. Reconsideration and withdrawal of this obviousness rejection is respectfully requested.

3. Yoshida in view of Kramer and Yoshida in view of Kramer and in further view of Robichaud.

The FOA rejected claims 18-20 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 4,762,514 to Yoshida (“Yoshida”) in view of U.S. Patent 4,072,233 to Kramer et al. (“Kramer”). The FOA also rejected claims 21-22 under 35 U.S.C. § 103(a) as being unpatentable over Yoshida in view of Kramer and in further view of Robichaud. Claim 19 has been canceled.

a. The Yoshida/Kramer and Yoshida/Kramer/Robichaud combinations do not teach or suggest an advantageous aspect of Applicant’s claimed invention.

Yoshida does not teach or suggest an arcuate-shaped channel. Kramer mentions that its piercing point may be “semi-circular.” However, Kramer does not illustrate what is meant by “semi-circular.”

According to a well-known dictionary, semicircle means “half of a circle as divided by a diameter.” *The American Heritage College Dictionary*, 1239 (3rd ed. 2000). Therefore, unlike independent claim 18, Kramer does not teach or suggest a frangible piercing point with a continuous channel through the exterior polymer layer that has an “arcuate portion [with] a first end, a second end, and a gap between said ends that is substantially less than the arcuate portion’s diameter.”

Applicant’s claimed piercing point is advantageous over Kramer’s semi-circular piercing point. This is because the channel of Applicant’s piercing point is the circumference of a circle less the gap space (which is substantially less than the diameter of the circle), while the channel of Kramer is only half of a circle. Because Applicant’s channel is substantially longer than Kramer’s channel, Applicant’s piercing point is more readily pierceable because it has a greater length of weakness. Furthermore, Applicant’s piercing point, which results in a hole that has a nearly completely circular hole boundary¹, is more likely to conform to a straw than Kramer’s piercing point, which results in a hole that is semicircular.² Consequently, Applicant’s piercing

¹ i.e., Applicant’s piercing point has a hole boundary that is all circular, except for the small segment of the hole boundary at the gap.

² i.e., Kramer’s piercing point has a hole boundary that is half arcuate and half straight.

point results in a hole that presents less space between the straw and the edge of the hole to allow spillage.

Applicant's claimed piercing point is advantageous because it offers a hole that is substantially circular to correspond to the outer circumference of a straw, but still maintains a hinge between the portion of the piercing point that is punched out by the straw. Thus, the punched out portion does not become free to be sucked up by the person consuming the beverage contained in the pouch.

Applicant respectfully submits that the Yoshida/Kramer combination fails to teach or suggest every aspect of Applicant's invention as recited in independent claim 18. Furthermore, adding Robichaud does not remedy the deficiencies of the Yoshida/Kramer combination. For at least this reason, Applicant respectfully submits that the Yoshida/Kramer and Yoshida/Kramer/Robichaud combinations do not make obvious independent claim 18 or its dependent claims. Reconsideration and withdrawal of the obviousness rejections is respectfully requested.

b. Yoshida specifically teaches away from its combination with Kramer.

In its "Background of the Invention" section, Yoshida states, "Kramer et al. U.S. Pat. No. 4,072,233 is concerned with a flexible container having a frangible piercing point. The frangible, or weakened, area is made by cutting, stamping, or the like to form a depression part way through the wall of the bag, the wall commonly being a multi-layered laminate. The disadvantage of forming the weakened area by mechanical means is that the depth of the weakened area cannot be accurately controlled and a weakening beyond the desired depth often occurs." *Yoshida, col. 1, ll. 53-63.*

Because Yoshida specifically points out Kramer's deficiencies and attempts to overcome those deficiencies, one skilled in the art would be discouraged from referring to Kramer and its teachings and suggestions. In other words, Yoshida teaches away from Kramer. Accordingly, Applicant respectfully submits that the combination of Yoshida and Kramer is improper. Reconsideration and withdrawal of the obviousness rejections is respectfully requested.

CONCLUSION

In view of the preceding remarks, Applicant respectfully urges that the objections and rejections be reconsidered and withdrawn and that claims 18 and 20-22 be allowed. However, if the Examiner believes that any issues remain unresolved, the Examiner is invited to telephone the undersigned to expedite allowance.

Respectfully submitted,

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Annotated Marked-up Drawings

FIG. 5

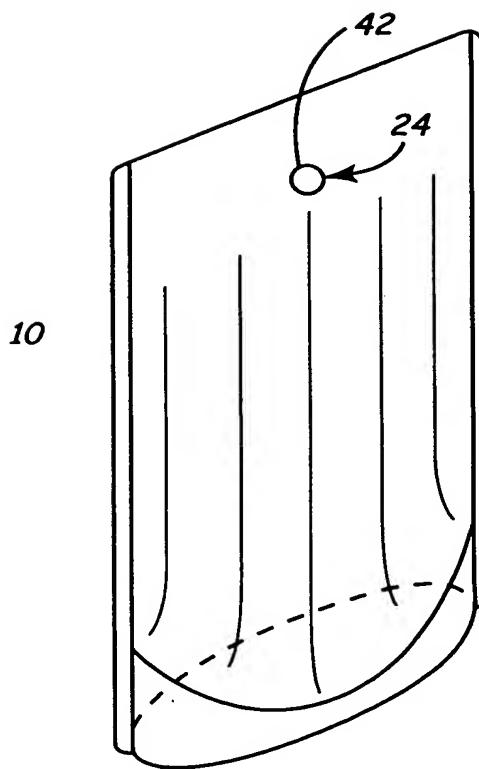


FIG. 6

